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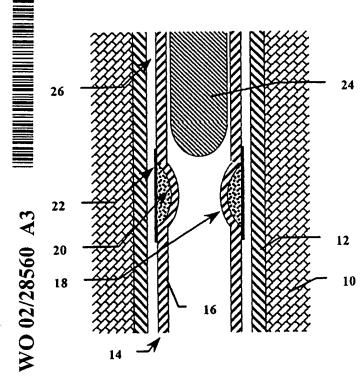
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(54) Title: METHOD AND APPARATUS FOR EXPANSION SEALING CONCENTRIC TUBULAR STRUCTURES



(57) Abstract: An apparatus and method for the sealing of a first tubular member (16) in a fixed position with respect to a second concentric tubular member (12). The inner tubular member (16) is formed with a shallow annular depression (18) in the tube wall at the point of sealant placement, which causes the wall of the inner tubular member to intrude into the otherwise cylindrical passage within the tube. On the outer surface of the first tubular member the depression is filled with a partially compressible fluid (20). The annular depression and the partially compressible fluid are then covered over by a malleable/ductile sleeve (22). Activation of the seal involves directing a cylindrical displacement device (24) through the inside of the inner tubular member and past the annular intrusion such that the wall is straightened. The partially compressible fluid and cover are forced outward into sealing engagement with the outer tubular member.



For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER			
IPC(7) : E21B 33/12; F16L 33/16 US CL : 277/314, 316, 333, 645; 166/187			
According to International Patent Classification (IPC) or to both national classification and IPC			
B. FIELDS SEARCHED			
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U.S. : 277/314, 316, 333, 645, 332-4, 626, 627, 646; 166/187			
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched			
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) East: tubes; pipes, compressible fluid, inflatable			
C. DOCUMENTS CONSIDERED TO BE RELEVANT			
Category*	Citation of document, with indication, where ap	propriate, of the relevant passages	Relevant to claim No.
Х	US 5,048,605 A (TOON et al.) 17 September 1991 (17-09-1991), see entire document.		
A	US 6,102,407 A (MORIYA et al) 15 August 2000 (15-08-2000), see entire document.		1-20
A	US 6,041,858 A (ARIZMENDI) 28 March 2000 (28-03-2000), see entire document.		1-20
A	US 4,651,818 A (JOHNSON et al.) 2 see entire document.	1-20	
Further documents are listed in the continuation of Box C. See patent family annex.			
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